DD/S&T 2856-66

MEMORANDUM FOR: Executive Director-Comptroller

SUBJECT   :   CIA Information Processing and ADP

I have reviewed your draft papers setting forth
principles to govern the anticipated growth of Information
Processing and ADP in CIA and offer the following changes
and additions as underlined on the attached pages.

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ALBERT D. WHEELON
Deputy Director
for
Science and Technology

Attachment:
  As Stated

25X1A

O/DD/S&T:⬚ /ab: 4249: 3 June 66

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D R A F T

12 April 1966

SUBJECT: Agency Policy on Information Processing and ADP

1.   Advances in information processing technology are impacting on our operating methods. A continuing review of the Agency's posture in the field of automatic data processing is necessary if the Agency is to profit from the rapid evolution of computer applications and communications capabilities. During the next decade, the Agency as well as the entire Intelligence Community, can anticipate a considerably enlarged requirement for information processing equipment and systems. Agency policy is to exploit this evolution by striving for the most effective development and use of human and material information processing resources. Accordingly, the following principles will govern the growth of this function in CIA:

    a.   Policy direction and staff responsibility for all information processing activities shall rest with the Executive Director-Comptroller, who will be supported by an Assistant to the DCI for Information Processing.

    b.   A CIA Computer Support Center shall be maintained in the Science and Technology Directorate to provide all Directorates with support for problem analysis, programming, and hardware operations.

    c.   [For the near term], The computer installations in RID and NPIC will remain decentralized. It is recognized, however, that future technological developments may dictate [otherwise] review of this decision.

    d.   Each Deputy Director shall appoint an Information Processing Coordinator to be cognizant of, and to coordinate solutions for, the information processing problems of his Directorate. This Coordinator shall supervise a System Design Group at the Directorate level and establish Problem Analysis Groups within Offices as required.

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2. The Assistant to the DCI for Information Processing will prepare and coordinate pertinent mission and function statements and issue appropriate definitions where required.

RICHARD HELMS
Deputy Director

D R A F T

7 April 1966

ASSISTANT TO THE DCI FOR INFORMATION PROCESSING*

Establishment of this function would recognize information processing as an activity in its own right within the Agency. The authority and responsibilities of this function would be those normally associated with staff support to the highest levels of Agency management.

Emphasis would be given to the following activities as they relate to providing the Agency with a single focal point for information processing management: a) represents the Agency in discussions of Governmental or Community-wide plans and policies; b) (provides) promotes (basic) efficient Agency management of human and material resources by establishing standards for the application of resources and ensuring the development of a professional environment through sound recruiting and training practices; c) provides guidance on the application of new developments in the art by recommending new programs and guiding R&D efforts; d) ensures that potential gaps and overlaps in overall Agency information processing management are recognized and addressed; e) (settles) arbitrates jurisdictional disputes

*See OPPB Planning, Assumptions, Goals and Objectives, Jan 66, pg 16-17 for areas encompassed by the terms "Information Processing"

in resource allocation and functional responsibilities and
recommends resolution thereof to the Executive Director-Comptroller;
and f) coordinates with O/PPB the Directorate submissions related
to information processing.

INFORMATION PROCESSING COORDINATOR

The creation of this position would fill two major gaps
in coordinating information processing activities at the
Directorate level: It would coordinate Directorate requirements
for information processing systems and support, and provide
OCS and other information processing facilities with guidance
on planning requirements and operational priorities. Both
controlling authority and coordinating responsibility would be
vested in this function.

The information processing coordinator would interpret
overall Agency policy as it applies to Directorate information
processing activities. He would ensure that the Directorate
is meeting its commitments in both Agency and Community efforts.
In addition, he would assist the Directorate Planning Officer
by reviewing pertinent Office planning, programming, and budgeting
submissions and would provide guidance and support to OCS
(and other information processing facilities) in their submission
of plans and programs.

His responsibilities should not necessarily be restricted
to computer systems or applications; the Deputy Directors con-
cerned may choose to interpret "information processing" broadly
to include organizational elements which are not ADP-oriented,
but which are basically concerned with providing internal

information processing services. In addition, the Deputy

Director may choose to make the information processing

coordinator directly responsible for the activities of the

system design group.

SYSTEM DESIGN GROUP

The creation of a system design group would fill the
basic need for a capability to study information processing
problems at the Directorate level. It would provide the basic
pool of expertise--with respect to both systems analysis and
computer technology--which the Directorate as a whole could task.

The system design group would be concerned primarily with
design problems of large scope--large with respect to resources
needed to attack a problem and the complexity of the activities
being investigated. The problems attacked by such a group would
necessarily involve some degree of imprecise definition, but,
on the other hand, would require the identification of a "system"
as a goal. The group would carry system design through analysis,
experimentation (and evaluation of results), and specification
of system functions so that production programming could be
undertaken. That is, they would be concerned with the "why"
and the "what" and only to a limited extent with the "how."
In addition to specific system design responsibilities, the
group would monitor the state of the art and recommend develop-
ment of techniques applicable to Directorate information processing
problems.

COMPUTER CENTER

Problem analysis, production and maintenance programming, systems programming, and computer operations are the functions associated with a computer center. The inclusion of all these functions is necessary if the computer center concept is to have validity. This does not preclude supplemental or complementary activity in several of these functions (particularly problem analysis) outside the management control of the computer center. Each of these functions is described below.

Aside from these operational functions, a major management activity in a computer center is the study of changing hardware requirements and the preparation of recommendations for installation of new equipment, based on studies of technical and economic feasibility. This does not preclude the possibility that hardware may be justifiable outside the Center.

Problem Analysis: Problem Analysis is a function and is not as a policy matter vested in any one group. It is performed by the Directorate's System Design Group or by any individual or group in any component of a Directorate or Office, or by the CIA Computer Center or a team comprised of people from these organizations, as directed or approved by the Information Processing Coordinator. It can be described as system design on a smaller scale where the emphasis is on the development

of methods for solving specific substantive problems by means of automatic data processing systems.

Production Programming: Production Programming is the development of computer programs in accordance with specifications produced by system design and/or problem analysis. It includes the interpretation of the specifications in light of the available computer facilities, the development of the internal logic of the computer program, the writing of the computer instructions (the program), and the testing and documentation of the program.

Maintenance Programming: Maintenance Programming is modification of a program to have it perform additional or different functions or to perform a function in a different way, in response to new user requirements. It also includes program changes intended only to improve the efficiency of the program or the information processing system of which it is a part.

Systems Programming: The programmers, operators, and machines in a computer center in themselves constitute a system, independent of the applications involved. This system requires analysis, design, programming, and maintenance efforts analogous to those required for problem programming. These activities are commonly called Systems Programming. Functions performed include the development and maintenance of programming language processors, and of the control programs which monitor and facilitate the operation of the machines as they perform their data processing tasks.

Computer Operations: Functions concerned with Computer Operations include the following:

Preparation of Input involves the conversion of raw data into a medium which can be read by machines (punched cards, punched paper tape, source documents for optical scanning, etc.). This activity may be performed in a central pool and, when feasible, in small units located close to the source of the data.

Control of Data Receipt and Dispatch involves the receipt, logging, storing, accounting and dispatching functions at the computer processing center--complementary activities of a similar nature are carried out within user areas.

Scheduling of Production implies the assignment of processing resources (computer equipment and operators) to information processing workloads in accordance with priorities, required job completion dates, and efficient equipment utilization.

Operation of Computer Equipment involves the processing of machine-readable data by operators of equipment which can range from small peripheral or support machines to large computer systems. Procedures and programs controlling these processes are furnished to operations personnel by systems and programming personnel. Substantial activities to support the operator at the machine are also involved such as management of large quantities of expendable supplies (paper, cards, magnetic tapes, ribbons, inks, etc.),

handling of finished reports (decollating, bursting, binding), operation of magnetic tape data library, and quality control and resolution of processing problems.